TABLE 95.15–90(a)(6)

Number of cylinders		Nominal pipe size, inches
Over	Not over	
	2	½—standard.
2	4	¾—standard.
4	6	1—extra heavy.
6	12	1¼—extra heavy.
12	16	1½—extra heavy.
16	27	2—extra heavy.
27	39	2½—extra heavy.
39	60	3—extra heavy.
60	80	3½—extra heavy.
80	104	4—extra heavy.
104	165	5—extra heavy.

[CGFR 65–50, 30 FR 17001, Dec. 30, 1965, as amended by USCG–1999–6216, 64 FR 53226, Oct. 1, 1999]

Subpart 95.16—Fixed Clean Agent Gas Extinguishing Systems, Details

SOURCE: USCG–2006–24797, 77 FR 33879, Jun. 7, 2012, unless otherwise noted.

§ 95.16–1 Application.

(a) ''Clean agent'' means a halocarbon or inert gas used as a fire extinguishing agent.

(b) A clean agent extinguishing system must comply with this part. Systems contracted for prior to July 9, 2012, may, as an alternative, comply with 46 CFR 95.16–90.

(c) Each clean agent system must:

(1) Be of a total flooding type to protect against Class B and Class C hazards as defined in 46 CFR 95.50–5;

(2) Address and minimize any hazard to personnel created by the effects of extinguishing agent decomposition products and combustion products, especially the effects of decomposition product hydrogen fluoride (HF), if applicable;

(3) Be accompanied by an approved manufacturer's design, installation, operation, and maintenance manual;

(4) Be used only to protect enclosed spaces;

(5) Not employ electric power for system actuation or controls; and

(6) Not use any source of power for alarms in protected spaces, other than the extinguishing agent, gas from pilot cylinders, or gas from cylinders specifically provided to power the alarms.

§ 95.16–5 Controls.

(a) At least one releasing station must be installed near the main entrance/exit to the protected space.

(b) System controls must be of an approved type and be suitably protected from damage and located outside the protected space.

(c) Systems must have releasing stations consisting of one control to operate the stop valve to the protected space and a second control to release at least the required amount of agent. These two controls must be located in a box or other enclosure clearly identified for the particular space.

(d) Systems protecting a single space not exceeding 6,000 cubic feet in gross volume may be installed without a stop valve if a suitable horizontal means of escape from the space exists.

(e) Controls may not be located in any space that could be cut off from the operator in the event of fire in the protected space.

(f) Where the extinguishing agent can be released by remote control, the system must have a manual local control at the cylinders.

(g) Systems with remotely operated releasing controls must have mechanical override features.

(h) Automatic discharge arrangements may be used for spaces having a gross volume less than 6,000 cubic feet. However, automatic discharge is required for spaces having a gross volume less than 6,000 cubic feet where the agent is stored in the protected space, as allowed by 46 CFR 95.16–20.

(i) A system designed to use gas pressure from one or more agent storage cylinders and provide pilot pressure to actuate the release of extinguishing agent from other storage cylinders that contain three or more total storage cylinders must be equipped with at least two designated pilot cylinders, each of which is capable of manual control at the pilot cylinder.

§ 95.16–10 Piping, fittings, valves, nozzles.

(a) Piping, fittings, and valves must be:

(1) In accordance with the manufacturer's approved design, installation, operation, and maintenance manual;

(2) Securely supported and when necessary protected against damage;

(3) Protected inside and out against corrosion; and

(4) Equipped with:

(i) Dead end lines (dirt traps) that extend at least 2 inches beyond the last nozzle of each distribution line and that are closed with a cap or plug; and

(ii) Drains and dirt traps, fitted where necessary to prevent dirt or moisture accumulation and located in accessible locations where possible.

(b) *Piping requirements.* Piping must be:

(1) Used exclusively for extinguishing system purposes;

(2) Protected by a pressure relief valve in sections where gas pressure can be trapped between closed valves; and

(3) Welded if it passes through living quarters.

(c) *Piping prohibitions.* Piping must not:

(1) Use rolled groove or cut groove ends; or

(2) Be fitted with drains or other openings if it passes through living quarters.

(d) *Valve requirements.* Valves for system operation must be:

(1) Outside the protected space, and

(2) Marked, if serving a branch line, to indicate the space the branch line serves.

(e) *Valve prohibitions.* Valves may not be located in any space that could be cut off from the operator in the event of fire in the protected space.

§ 95.16–15 Extinguishing agent: Quantity.

A separate supply need not be provided for each space protected, but the total available supply must be at least sufficient for the space requiring the greatest amount.

§ 95.16–20 Extinguishing agent: Cylinder storage.

(a) Unless installed as required in paragraph (b) of this section, the agent must be stored outside of the protected space. Common bulkheads and decks located between the cylinder storage room and the protected spaces must meet the insulation criteria for Class A–60, as defined in 46 CFR 72.05–10.

(b) The cylinders may be stored inside the protected space, if:

(1) The space does not exceed 6,000 cubic feet gross volume; and

(2) The system can be automatically operated by a pneumatic heat actuator as well as a remote manual control.

(c) The cylinder storage space must be properly ventilated and designed to preclude an anticipated ambient temperature in excess of 130 °Fahrenheit.

(d) The cylinders must be securely fastened and supported as directed in the manufacturer's approved design, installation, operation, and maintenance manual, and where necessary protected against damage.

(e) The cylinders must be mounted so they are readily accessible and capable of easy removal for recharging and inspection and for weighing in the case of halocarbon system cylinders.

(f) The cylinders must be installed to provide a space of at least 2 inches between the deck and the bottom of the cylinders. A tray or other bottom support located 2 inches above the deck is an acceptable arrangement.

(g) The cylinders must be mounted upright, unless otherwise specified in the instruction manual.

(h) All cylinder storage room doors must open outward.

§ 95.16–25 Manifold and cylinder arrangements.

(a) A check valve must be provided between each cylinder and manifold or distribution piping. The valve must be permanently marked to indicate the direction of flow.

(b) If the same cylinder is used to protect more than one space, normally, closed stop valves must be provided to direct the agent into each protected space.

(c) Each cylinder must be fabricated, tested, and marked in accordance with 46 CFR 147.60(b) and 49 CFR part 180.

(d) The cylinders in a common manifold must be:

(1) Of the same size;

(2) Filled with the same amount of agent; and

(3) Pressurized to the same working pressure.